



Contracting for Renewable Energy

**Dyess AFB Renewable Use
Tom Denslow
Base Energy Manager**

Dyess AFB Renewable Use



- Dyess is home to the 7th Bomb Wing (B-1 Lancers) and the 317th Airlift Group (C-130s)
- Dyess has an electrical max load of 15.8MW and an annual usage of 78,000,000 kWh per year
- Dyess began pursuing renewable (wind) energy in June 2002

Dyess AFB Renewable Use



- Green energy does not count as consumption in meeting the required energy reduction goals of EPACT of 1992 and Executive Order 13123
- If Dyess went 100% green, the results would be over 50% BTU/sqft reduction relative to the 1985 baseline and reduction of MAJCOM energy consumption by 2% (one years' required reduction)

Dyess AFB Renewable Use



- To obtain 2% reduction at MAJCOM it would require over \$20M of ECIP projects
- 100% renewable energy only cost \$1.5M/yr for two years with the same 2% reduction and MAJCOM agreed...Dyess then had DESC add wind power to the remaining 2 years of the existing contract

Dyess AFB Renewable Use



- Under regulation, electricity was \$.066/kWh
- Electric deregulation started in Texas in January 2002
- Dyess, through DESC, negotiated a 3-year contract with supplier TXU Retail Energy
 - Rate: \$.042/kWh for the retail energy, \$.009/kWh for transmission, totaling \$.051/kWh

Dyess AFB Renewable Use



- Energy purchased through DESC contract comes from 11 wind turbine farms throughout West Texas using the Green Certificate system
- Green Certificates are the only way wind power is sold in deregulated Texas
- There is no on-site wind generation at Dyess

Dyess AFB Renewable Use



- Trent-Mesa wind site operated by AEP energy purchased by TXU Retail Energy



Dyess AFB Renewable Use



- Deregulation
 - Before: \$.066/kWh for electricity
 - After: \$.070/kWh for wind energy
\$.051/kWh for non-renewable energy
- Our itemized cost per kilowatt-hour for wind energy
 - \$.019/kWh (wind energy surcharge)
 - \$.042/kWh (basic fee)
 - \$.009/kWh (transmission charge)
- This is a flat rate, there are no peak/off-peak rates

Dyess AFB Renewable Use



- We have eliminated up to 78,400,000 kWh of conventional fossil fuel generated emissions
 - Over 58,000 Tons of CO₂ per year
- Was the largest purchase of renewable energy in the U.S.
- Following our lead Fairchild AFB has gone 100% at a slightly lower consumption

Dyess AFB Renewable Use



- Dyess is installing 4200 ton-hrs of thermal energy storage to shift peak loads
- A new contract is being developed that will reduce rates (upwards of 30%)
- Dyess' electric rate is expected to be at or below the deregulated non-wind energy price while maintaining 100% renewable energy usage

Dyess AFB Renewable Use



Contact information:

Tom Denslow 325-696-5628
george.denslow@dyess.af.mil